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ABSTRACT

Reading and writing behavior of 12 moderately mentally retarded adolescents was examined. Data were collected on 11 language tasks, including drawing, reacting to print in a book, being read to, and answering questions about reading and writing. Interviews and surveys regarding attitudes toward reading and home environment were completed as well as miscue analysis of Ss' oral reading. Results indicated that Ss' reading and writing behavior could be analyzed, categorized, and measured qualitatively within a particular psycholinguistic paradigm. (Author)

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A DESCRIPTION OF MODERATELY MENTALLY RETARDED ADOLESCENTS' RESPONSES TO WRITTEN LANGUAGE

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This study involved a comprehensive analysis of the reading and writing behavior of 12 moderately mentally retarded adolescents.

Data were collected on 11 language tasks. These tasks included drawing, forming letters and numbers and their names when applicable, being read to, reacting to print in a book, reading if applicable, and answering questions about reading and writing. Other tasks ascertained the subjects' book handling knowledge as well as reading ability. Interviews and surveys were conducted to determine subjects' attitudes and concepts of reading and writing, parental attitudes and models of reading, subjects' developmental and educational history, and home environment. Subjects' miscue analysis (i.e., deviations from print) of their oral reading revealed how well they utilized the syntactic, semantic, and graphophonemic language systems.

The results indicated that these adolescents' reading and writing behavior could be analyzed, categorized, and measured qualitatively within a particular psycholinguistic paradigm.

The implications focused on the practical implementation of whole language (Goodman, 1967, 1969, 1973, 1976) instruction and activities into the school curriculum and home environment for mentally retarded individuals.

A Description of Moderately Mentally Retarded Adolescents Responses to Written Language

Traditional research in reading behavior of the nonretarded and retarded has tended to investigate the reading process in quantitative measures such as isolation of sounds, letters, word parts, and sentences or by correleating such variables as intelligence, visual or auditory discrimination with the ability to read (e.g. Anastasiow & Stayrook, 1973; Eisenson, 1972; Kirk & Kirk, 1972). Since this type of research tends to measure reading proficiency with such elements as sounds, letters, word parts, single words and phrases the natural consequence is an instructional intervention that will change those particular elements of reading behavior (e.g. Forell, 1976; Kirk, Kliebhan & Learner, 1978; LaBerge & Samuels, 1974; Samuels, 1973). This intervention reflects established definitions or models of reading such as phonics, whole word or skills approaches (Harste, 1978). When quantitative differences of these isolated reading behaviors are utilized in determining efficient and nonefficient readers then reading necessarily becomes defined in quantitative terms.

In contrast to this research perspective, illustrated by investigators such as Carnine (1977), Goodman and Goodman (1977) argue that this instructional fragmentation actually distorts the reading process. This distortion occurs when isolated features of reading are presented to the learner without a meaningful context. In an earlier study, Goodman (1965) provided empirical support that readers recognized the same words with greater accuracy when they appeared within a passage (i.e. in context) as compared to when they appeared on a list (i.e. in isolation). It should be noted, however, that this finding was not replicated with the mentally retarded (Kirkman, Endo, & Crandall, 1979). Later research by Goodman and his associates (Allen & Watson, 1976) demonstrated that the single difference between readers at differential levels was their ability to comprehend what they read. Through analysis of oral reading miscues, (Gutknecht, 1976) was able to illustrate that low proficiency readers were using the same processes as high proficiency readers only less well . These findings clearly demonstrate that qualitative aspects of reading behavior (e.g. the effect of miscues on comprehension) could be measured.

The research involving analysis of oral reading miscues has developed a model of reading which utilizes the cue systems of semantics, syntax, and graphonemics. These three cue systems are utilized to arrive at meaning during the reading process. The miscues are evaluated in terms of their differential effect on comprehension. Therefore some miscues may be determined to be a higher quality than others. In this respect reading is measured in a qualitative manner.

The theoretical framework underlying this research focused on the reading process as a combination of syntax, semantics, and graphophonemics cue systems working in conjunction to produce meaning for the reader

(Burke, 1976). In addition, miscue studies (Allen & Watson, 1976) as well as research of linguists (Palmer, 1979) and psychologists (Miller, 1965) have presented reading as an integral part of the total language process. This perspective supports a language arts model which includes reading and writing as the written facet of language while listening and speaking are oral components of language. Continuing research which explores the parameters of Goodman's model has developed into a fruitful avenue of psycholinguistic research as well as providing substantial insights into language acquisition of young children. However, due to the relative infancy of Goodman's language model there is a paucity of programmatic evaluation which tests the efficacy of this instructional approach.

On the basis of a major comprehensive review of the reading literature regarding mentally retarded populations, Yoder and Miller, 1972 concluded that enough evidence existed to justify the practitioner's "... selective use of the data available on normal language acquisition" (p. 100). Subsequently, researchers in mental retardation have concentrated on the development of sophisticated instructional technologies based upon several global learning theories (e.g. Mercer & Snell, 1977; Smith, 1974). These instructional approaches overlay any academic endeavor (e.g. mathematics, reading, writing). Consequently, what is taught is secondary to how it is taught. While research clearly indicates that in the context of demonstrating that a specific technique (e.g. operant conditioning) is efficient (e.g. Dorry & Zeaman, 1976; Rydberg, 1971), the models of reading are merely extrapolated from traditional reading paradigms (e.g. sound/symbol, decoding, vocabulary skills). Furthermore, research into reading behaviors of retarded children are restricted to quantitative data which necessarily leads to quantitative conclusions (i.e. mentally retarded acquire written

language slower and at a lower level than nonretarded children) Dunn, 1973; Cegeika & Cegeika, 1970; Smith, 1974.

NEED FOR THE STUDY

While proponents of the whole language model insist that the distinct need exists to explore qualitative facets of language behaviors of children who develop normally (e.g. Goodman, Goodman, Y., Burke, Watson, etc.), the need is definitely present to collect qualitative data involving those children who are exceptional in their reading and writing development.

The reading and writing attempts of mentally retarded children reveal what and how they learn about written words. Therefore it is necessary to ascertain how mentally retarded children conceive these processes. As researchers attend to the circumstances which accompany the reading and and writing of these children (e.g. home environment, school instructional environment) relevant variables that lead to language learning of exceptional children may be identified.

In discussing young nonretarded children, Clark (1976) emphasized that the strengths and weaknesses of reading must be considered in order to understand those abilities crucial to the reading process. This quanlitative approach to reading research would lead to qualitative interventions (i.e. where language is kept intact and meaning centered) in classroom activities with nonretarded as well as retarded individuals.

Purpose of the Study

The purpose of this study was to conduct a comprehensive investigation of the reception and production of the written language of a selected group of moderately mentally retarded children. This study presented a detailed description of the reading and writing behaviors of a selected group of moderately mentally retarded children using qualitative measures such as book handling ability, concepts of reading, and home background. These

data were obtained by parent and student interviews, the investigation of writing behaviors, and oral reading behavior through miscue analysis procedures (Goodman & Burke, 1972).

The following questions concerning the reading and writing behavior of the moderately mentally retarded were generated to guide this investigation:

1. Does home environment affect the reading and writing behaviors of of moderately mentally retarded children?
2. Do moderately mentally retarded children demonstrate an awareness of the written production of language by producing writing patterns?
3. How do moderately mentally retarded children view the purpose of writing?
4. Do moderately mentally retarded children demonstrate knowledge of spelling and graphophonemic relationships?
5. Do moderately mentally retarded children demonstrate a developing awareness of written receptive language by exhibiting certain reading patterns?
6. How do moderately mentally retarded children view the purposes of reading?
7. How do moderately mentally retarded children describe the reading process?
8. What differences and similarities are evidenced in moderately mentally retarded children's written language behavior?

In addition, the miscues of the readers in this group were systematically analyzed. The questions which were generated include:

1. Is reading comprehension as measured by retelling dependent on word identification?

2. Does the reading of moderately mentally retarded in this study emphasize the use of any one of the language cues systems of syntax, semantics, or graphophonemics?
3. Do moderately mentally retarded readers in this study produce a high percentage of semantically acceptable miscues?
4. Do moderately mentally retarded readers in this study produce a high percentage of semantically unacceptable, but corrected miscues?

Subjects

The children were twelve adolescents (five females, seven males) who were classified moderately mentally retarded (i.e. trainable level) by a certified school psychologist on the basis of individualized intelligence tests and measures of adaptive behavior. The children's chronological ages ranged from 13 years 5 months to 15 years 6 months ($\overline{X}$=14-6) while their mental ages ranged from 4 years to 6 years 6 months ($\overline{X}$ = 5-5). Their intelligence scores ranged from I.Q.'s of 38 to 54 ($\overline{X}$ = 45) while their adaptive behavior scores fell within the moderate deficit range of functioning (Grossman, 1973). All but one of the children were residing in home environments in which English was the predominant language. In Gilberto's home, Spanish was the primary language.

The twelve children lived in a large metropolitan area with a population of over one million. All the children resided at home and attented public school. They were all enrolled in the same school within two self-contained classrooms for the moderately mentally retarded, grades 7-9. The student composition of these classes represented the entire junior high school age moderately mentally retarded population within one of six geographically defined sub-districts of a major urban public school system.

All the children who met the criteria for moderately mentally retarded (Grossman, 1973) were included in the present study. These children were equivalent to the moderately mentally retarded adolescents who were enrolled in the other five sub-districts of the same school system on the basis of race, socio-economic background, primary language in the home, chronological age, mental age, I.Q., adaptive behavior level, degree of regular classroom integration, and educational background.

PROCEDURE

Since children's home background is frequently explored in its relationship to reading and writing behavior (Durkin, 1966; King & Friesen, 1972; Read, 1970; Teale, 1978; Wiseman, 1979), adaptation of a parent interview by Mason (1978) was utilized in this study. This questionnaire was designed to elicit information which would provide insights into children's early language behavior. Questions about each child's awareness of print as well as his/her reading and writing behaviors in the home were included in the interview. In addition, portions of the Burke Interview of Reading (1976) were incorporated into the questionnaire in order to learn about parents' ideas of the reading process. This information was critical in ascertaining the possible etiology of the child's concept of reading as well as the presence of modeling reading behavior in the home.

The data from each of the twelve children were collected during individual sessions by their classroom teacher within the daily school activity schedule. While the classroom aide directed reading and writing projects, the teacher, in another section of the room, elicited the data from each child as part of the regular instructional program. Randomization was utilized to determine the order of participation as well as the sequence of inventories and interviews.

Book Handling Knowledge

The child's knowledge of books was assessed during the reading of The Monster at the End of the Book (Stone, 1972). The Pre-School Book Handling Knowledge (Goodman, 1977) was integrated during the reading of this book. This opportunity for behavioral observation was included in the study to determine the knowledge these children had of written materials. During the reading, the investigator recorded each child's responses relative to the left-to-right direction of print, identification of letters and words, inverted print, differentiation between pictures and print, word-by-word matching, and the general knowledge of story format.

Concepts of Reading and Writing

In the present study each child's concepts and attitudes about reading and writing were obtained from interviews designed by Goodman and Cox (1976) and Burke (1974). These interviews provided data on the language these children used to communicate about reading and writing as well as their ideas on the function and purpose of print. In addition several activities were included that required children to produce concrete samples of writing as well as to differentiage between writing and drawing.

Miscue Analysis

The Reading Miscue Inventory (RMI) (Goodman & Burke, 1972) was developed to analyze an individual's oral reading. When a person reads, they deviate at times from the actual print represented on the page. The resulting oral deviation from print is called a miscue. The RMI provides a series of questions which the researcher uses to determine the quality of the reader's miscues. The questions involve such factors as dialect variation, intonation shifts, and grammatical acceptability. These questions focus on the effect that each miscue has on meaning as well as on the readers use of available

language cues. Percentages are determined for each question by computing the total number of miscues involving each question and the number of miscues designating either high, partial or low responses to the nine questions.

The RMI has been used ir a variety of research studies. The effect of a saturated book environment on miscues (Watson, 1973), miscues of Mexican American readers (Young, 1973), and miscues generated by older readers (DeSanti, 1976) are some of the various topics explored in relation to miscue analysis. Research studies utilizing the RMI have consistently demonstrated that readers used the three cue systems to find meaning in print. However, only two studies (Brody, 1973; Gutknecht, 1976) have investigated the miscues of children who were not developing reading normally. Gutknecht (1976) found that learning disabled children made the same types of miscues of those children without learning problems. The differences between the miscues of the two groups of children appeared in the number of miscues and the number of successful correction attempts. Brody (1973) also found that retarded readers made more miscues than the comparison group of proficient readers.

In the present study, those children who demonstrated the ability to match the spoken word with words in print during the book handling inventory were requested to read several selections so that miscues could be analyzed. A wide range of materials were available to meet the varied interests and abilities of the children in the study. Each child read at least five selections which were taped for further analysis. The stories included: The Cat, The Bird, and The Tree (Mackay, Thompson & Schuab, 1973); My Mom (Mackay, Thompson & Schuab, 1973); See Us Play (Bond, Dorsey, Cuddy & Wise, 1958); Max (Raabe, 1974); Dee and the Bee (Granowsky & Orfe, 1973);

and A Day At Home (Goodman & Burke, 1972).

DATA ANALYSIS

The data from the interviews were analyzed to determine each child's concept of reading and writing. These ideas were presented in a descriptive manner so that the children's actual presentation of ideas were maintained. The moderately mentally retarded readers provided data from a minimum of five selections for analysis of miscue behavior according to RMI procedures. These oral reading data were transferred to worksheets for subsequent coding. These worksheets were scored and coded and retelling scores were calculated.

RESULTS

Information from the Home

Sixteen parents participated in the parental interviews. Five of the children were from single parent homes. Gilbert's mother spoke only Spanish and did not complete the questionnaire while one Frank's father began the questionnaire, but declined to answer all the questions. Two of the children were living with adults other than their natural parents.

Thirteen of the parents had not completed high school, two had completed high school and one parent had attended 1 1/2 years of junior college. Eight parents were employed as laborers, four were blue collar workers, three were unemployed and one was self employed.

All but five of the parents reported that they had learned to read at school. Two parents recalled that they had taught themselves to read, one acquiring that skill after high school, and two parents remembered that they had been taught to read at home. Two fathers felt that they were poor

readers while all other parents responded that they were good readers most of the time. The distinguishing skills of good readers as defined by these parents were practice, understanding, speed, memory, spelling, and word identification. To improve their personal reading skills, parents mentioned such factors as reading faster, understanding a wider variety of reading materials and spelling more words. To identify unknown words, most parents used the dictionary or ask a spouse or friend. Sounding out the word, spelling the word or using contextual clues were other unknown word identification techniques used by the parents.

Eight parents routinely read the newspaper, seven read the Bible, four read magazines, and three read books. Routine reading was indicated as frequently as three or four times a week to twice a year. The Bible, Loretta Lynn, Peyton Place, A Child's Garden of Verses, Black Beauty, and Jane Eyre were listed as memorable books read by the parents.

Parental questionnaires indicated that 3/4 (9) of the children were rarely read to on a regular basis. One parent indicated that her child was read to at least one hour a week while the parents of two children indicated that they were read to at least two hours a week.

Parents indicated that five of the children watched T.V. for two hours daily, five of the children watched T.V. for one hour daily, while 2 children watched a total of no more than 30 minutes a day. When asked directly, five of the parents indicated their children did not watch Sesame Street while eight indicated their children did not watch Electric Company. Except for one, all subjects watched Saturday morning cartoons.

Only one parent indicated that children's magazines were available to the child. Sedrick possessed a subscription to Sports Illustrated. Nelly's mother reported that she purchased three books a month for her child.

Six of these adolescent youth had never visited the public library while parents of six other children indicated irregular visits to the library. Parents of five of the children indicated their children accompanied them on less than 5 outings a week. Unacceptable social behavior was noted as a prominent reason for leaving these children at home. Six of the children accompanied their parents on at least four outings a week while one child accompanied his parents at least six times a week.

Parents reported their children's interest in print in a variety of ways. Nine parents felt their children could recognize twenty or more letters while three credited their children for recognition of 10 or less letters. Eight parents recalled their children wrote letters while drawing at home and four parents seldom ever noted production of letters. Eleven parents identified their children as recognizing less than ten words. Only one parent felt her child could read more than twenty words. Parents reported that four of their children seldom asked for assistance in identifying printed words. Eight of the children, according to parents, expressed an occasional interest in identifying words. Parents reported six children would occasionally ask to be read to, five children seldom asked to be read to and one child asked and was read to regularly. Parents of eight children responded that they never observed their children attempting to identify a word by sounding out letters while four of the children occasionally were observed in this effort. All but one parent reported their children had opportunities to observe parental reading behavior.

Writing and Spelling of Adolescent Moderately Mentally Retarded Children

The twelve subjects were asked to complete two writing tasks and a writing interview in order to demonstrate their knowledge of abilities in

writing. All twelve children were asked to write. Given the choice of lined and unlined paper only one child, Nelly, chose unlined paper and produced a picture of a house and trees. Nelly then responded to the directions "write your name" by producing her name, address, date, and subsequently produced a list of words to represent writing. All other children chose lined paper and produced some form of letters to represent writing. All children were able to spell their name correctly and use correct directional patterns. One child was able to produce her name in cursive. All other writing was done in manuscript. The most common representation of writing presented by these children was lists of words. The ABC's, addresses and dates were also presented as writing. Only Karl presented a sequence of words with punctuation to represent writing (e.g. "your name?", although he copied from the chalkboard). Karl produced random letters to represent writing and Mark and Gilbert filled the entire page with one or two letters (e.g. a and a, c) when asked to write.

A second writing task involved the same procedure as the first writing task except that no lined paper was available. The children were given unlined paper and instructed to "write for me". Karl, who had produced a sequence of two words on the first task, spelled his last name incorrectly and produced a sequence of letters (e.g. owouoh) which he translated as "write". James had correctly written his name and produced letters on task one, attempted but was unable to produce his name consistently. However, he produced numbers, some of which were reversed, to represent writing. Mark produced an entire page of "a"'s and "c"'s on the first task drew a picture for task two. Demi produced the alphabet, a list, and her name and address on the first task and drew a picture on the second task. Numbers were produced on this second task by Gilbert who had produced an

entire page of a's in response to the first task.

When children produced their names, addresses or dates, spelling was generally correct. Three children misspelled their last names. Four of the lists contained misspelled words however the majority of the words were spelled correctly. Only in two cases were groups of random letters used to represent writing.

These children viewed the purpose of writing (e.g. Why do people write?) in a variety of ways. Only one child did not respond to this question. Other responses did not indicate a conceptualization of the purpose of writing (e.g. because they're left handed, someone taught me). Laura saw the purpose of writing as a response to a request, Paul said to "get work done" and Karl and Mark explained that the purpose of writing was to write their name. Acquisition of knowledge (e.g. to learn) was mentioned by Sedrick and Demi as a purpose for writing. Eleven affirmative answers were produced when the children were asked if they wrote at home or at school. Karl responded that he did not write at home.

When the children were requested to explain what was accomplished during the process of writing or drawing they all described writing as involving words, usually their name, address, etc. Drawing was described by naming objects that could be drawn. A concrete writing/drawing discrimination task was administered to each child. This task was composed of the child's own writing and drawing productions. Each child was asked "which one is writing?" and "which one is drawing?" Over five trials with the productions presented in random order, all twelve children completed the task successfully.

The Reading Behavior of Trainable Mentally Retarded Adolescents

All subjects were asked questions from Goodman and Cox Book Handling Knowledge Inventory (1977) and Preschool Concept of Reading (1977). Both were designed for children who were not reading. Behaviors and responses were recorded in order to determine the children's knowledge of books, purpose for reading and exhibition of their reading behaviors.

While nine of the children could correctly identify a letter upon request only six of them were able to correctly identify words. Avia consistently identified words but was unable to demonstrate an awareness of the concept of "letter". Only four of the children were able to differentiate upper case vs. lower case letters.

Nine children were able to demonstrate an understanding of the concept of page. The belief that a page must contain print caused confusion on the part of some of the children.

All but Karl and Avia were able to indicate where reading in a text began. These two children were joined by Mark who was unsuccessful in attempting to indicate the direction of print. Six of the children produced close matching (i.e. within the printed line) between vocalized reading and the text. Three children produced exact matching between text and vocalized reading.

Responses were varied when these twelve subjects were asked to read unfamiliar print. Demi did not respond while Sedrick was able to read the text. Paul and Sedrick attempted to read by sounding out the words. Four children orally interpreted the story by using pictures as cues to the meaning. Nelly responded nonverbally by moving her finger under the words while Fran demonstrated the correct eye movement for reading. Only Mark's verbal production had no relationship to the story.

These mentally retarded children expressed diverse purposes for reading

(i.e. Why do people read?). Four children indicated the purpose for reading was pleasure (i.e. Because its fun.). Four other children felt the purpose for reading was the acquisition of knowledge (i.e. To learn things or to understand books). One child mentioned a functional purpose for reading (i.e. To help buy things.). Three children responded to this question with a nonmeaningful response (e.g. I don't know, because they have too much work, or because reading...).

Nine children mentioned that family members would help them learn to read more effectively. The other three children gave this responsibility to the teacher. Seven of the children felt that learning to read would be easy as opposed to very hard. Six children felt that having books read to them or simply looking at books would help them learn to read. Two children mentioned memory (e.g. learn the book) as a method for learning to read. Spelling the words and knowing the ABC's were also offered reading acquisition strategies. Wearing glasses and getting help from sisters or brothers were offered as reading instructional methodologies.

All children were given an opportunity to provide data according to miscue analysis procedures of the Reading Miscue Inventory (RMI) (Goodman & Burke, 1972). The RMI involves a comparison of expected responses and observed responses and only three of the children were capable of presenting reading strategies effective enough for miscue analysis. Graphic similarity, sound similarity, grammatical function, grammatical acceptability and meaning change were studied.

Miscue Analysis involves having the reader read a complete selection without interruption and retelling the selection afterward. Both the reading and retelling are tape recorded for further analysis. Analysis of miscues yields information concerning the degree to which the reader successfully

constructs meaning and the extent to which he makes efficient use of the available cue systems. In addition, the kinds of cues and particular strategies the reader relies on most strongly are revealed. Retellings provide evidence of the degree and kind of comprehension that occurs, and in this regard serve as a further indication of the success of the reader's strategies for dealing with written language.

Omission was one of the most common behaviors when unfamiliar words were met in the text. Selections were not coded when a majority of the miscues involved omission.

One reader, Jackie, was willing to exercise considerable risk in her reading. She attempted each word resulting in a 74% high/partial graphic similarity and 64% of her miscues demonstrated no sound similarity on the predictable text selection. An example producing these percentages is shown below:

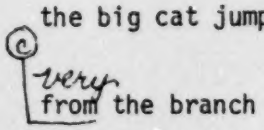
little
the cat looks up.

A traditional basal reader story produced miscues with a high percentage of partial graphic and partial sound similarity.

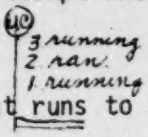
Jackie's comprehension pattern resulted in a 68% loss of comprehension and a 76% weakness in grammatical relationships. In considering fifty miscues, Jackie had no successful corrections and in fact had attempted to correct only three times. There were no significant differences in comprehension patterns and grammatical relationship patterns in the oral reading of all three selections.

Fifty-two percent of Laura's miscues included omissions. All but one omission resulted in a loss of comprehension. Eighty-eight percent of her substitution miscues involved high/partial sound and graphic similarity. The

one miscue Laura successfully attempted to correct is demonstrated in the text below:



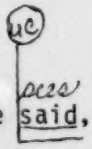
The one unsuccessful attempt she made at correction is shown below:



Laura's omissions and lack of correction strategies resulted in a pattern involving 77% comprehension loss and a 72% weakness in grammatical relationships. Laura produced very similar patterns of grammatical relationships and comprehension across the three stories.

Sedrick's grammatical relationships and comprehension patterns seemed to be primarily affected by the reading involving limited vocabulary from the traditional basal reader story. His miscues produced a 44% loss of comprehension and 39% weakness in grammatical relationships while reading the basal selection. Sedrick's miscues produced in reading other texts resulted in an 80% loss of comprehension and 80% weakness in grammatical relationships.

Although Sedrick's miscues involved many omissions (66%), substitution miscues involved a great percentage of high/partial sound and grahpic similarity in all texts that he read. Sedrick's only attempt to correct a miscue is shown below:



The retellings of these stories were brief and involved much probing from the investigator. Many times the retellings involved story-lines not present in the selections. Often incorrect information was offered even

with very direct probing. Story lines appeared to be held intact by pictorial cues. This was apparent as information directly from the pictures was offered during the retellings (e.g. Sedrick explained that the cat in the story was orange. This information was only available from the picture.) Another indication that pictures were offering many informational cues was apparent when the three children were asked to read a portion of the story without pictures. Miscues from this section of the reading demonstrated inefficient reading strategies:

rat ran away
Little robin red breast

and to
sat upon a tree.

play
up went pussy cat

Discussion

The parents of these twelve moderately mentally retarded children were characterized by low educational levels with occupations concentrated in blue collar and unskilled labor positions. With few exceptions parents were consistent in describing their personal concepts of reading. Most parents felt that competence in reading was acquired through comprehension and practice and that good readers maintained their skills through practice. Although most parents felt they were good readers their expressed unknown word identification skills (e.g. utilizing of the dictionary, sounding out the word, asking for assistance) indicated analytical skills which would characterize inefficient or dependent reading behaviors (Goodman & Burke, 1977). Concurrently, routine reading of this parental group was minimal, therefore severely restricting their children's opportunities to observe this crucial modeling activity (Wiseman, 1979). Another limitation encountered in these home environments was a lack of variety in printed material for both children

and adults. Books other than the Bible were the least mentioned vehicle for reading activity. The only material read on a daily basis was the Bible.

One other limitation found in the home environment was the lack of time spent in oral reading to the child thus restricting their opportunities for exposure to print. Although these children are at a chronological level in which adults do not normally read aloud, they are at a reading development stage where oral reading would be beneficial. Aside from the fact that these are older children, interviews with them strongly indicated that they enjoyed this activity.

Most parents related that television was a major entertainment vehicle for their children, however, educational programming (e.g. Sesame Street, Electric Co.) was secondary to commercial programming (e.g. cartoons). Opportunities for exposure to print outside the home (e.g. library visits, shopping trips) were severely curtailed since these children were rarely included in these activities.

Without regard to its etiology, the home does not appear to be an instrumental factor in the acquisition and utilization of reading skills. It would appear that under these circumstances, the children of these parents would not recognize the importance of reading through their interaction with the home environment.

Writing and Spelling of Moderately Mentally Retarded Adolescents

These children responded with little variance when asked the purpose of writing (i.e. Why do people write?). Children explained the function of writing in a utilitarian fashion (i.e. writing name, get work done) they never indicated that meaning was conveyed by their own print production.

Some children demonstrated confusion between writing and drawing. Most confusion was evidenced when they were asked to verbally express differences between writing and drawing. This may well have been a result of their limited verbal expression skills. Less confusion was demonstrated when the children were asked to draw or to write. Only three children were confused in their attempts to respond to this request. When concrete discrimination was required all children were successful at indicating the difference between writing and drawing.

The total print production of these children was confined to the following items: 1) first and last names; 2) addresses; 3) city and state; 4) date; 5) alphabet (upper and lower case); 6) isolated letters; and 7) isolated words usually in list form. With one exception, all of print production could be traced to their present as well as previous classroom exposure to print. Other than one of Karl's responses (e.g. "owouoh"=write), there appeared to be no original print generation. No child wrote any segment larger than a word. All children demonstrated some capacity to reproduce writing expected of them in a particular instructional program (i.e. sight words, alphabet, names and addresses). No child was able to produce meaningful thoughts through written language. For the most part, the ability to convey meaning through written language had not been an instructional goal in their past educational histories.

Reading of Moderately Mentally Retarded Adolescents

There appeared to be greater interindividual differences between children's reading behaviors than what was noted in their writing behaviors. To determine book handling knowledge, eleven skills were identified for the purpose of analyses. While no one skill was successfully accomplished by all 12 children, all eleven skills were correctly responded to by at least

one child. Due to the scatter of correct responses determining skill accomplishment, no predictable pattern or sequence of book handling skills emerged from analyses of these data. The book handling skill accomplishment ranged from a high of 9 out of 11 by Sedrick and Laura to 1 out of 11 by Karl. Parent interviews in home background failed to discern any particular discrepancy that might account for the wide variation in children's book handling ability. Therefore, children's educational history was investigated to determine common characteristics which might account for similarities between Laura's and Sedrick's book handling abilities as well as Karl's lack of ability. The common factors were age, previous educational programming, and instructional consistency. Laura and Sedrick were among the youngest children in the group while Karl was one of the oldest. Also, Laura and Sedrick had the same teacher for the previous two years in elementary school and their teacher emphasized the language experience approach. Karl, on the other hand, had two different teachers for the last two years and those teachers concentrated on sight words, rote recitation and writing of the alphabet. Laura's and Sedrick's educational program stressed printed language generation (i.e. language experience stories) while Karl's instructional program had stressed copying from the board or working prepared ditto sheets. While previous educational goals for Laura and Sedrick included a variety of experiences with books (e.g. library reading) Karl's previous educational programming made no reference to the utilization of books.

The children's expressed purposes for reading were far more realistic and reasonable than those purposes expressed for writing. The purposes that were mentioned stressed pleasure, acquisition of knowledge, and utility. These responses suggested more exposure and interaction with the reading

process (i.e. older siblings doing homework, reading for pleasure).

In discussing who would teach them to read, only three children delegated that responsibility to the teacher while the remainder of the children felt that some family member would assist them in acquisition of reading skills. This result is extremely ironic as well as professionally disappointing in the face of the children's seven to nine years of formal education, the advent of sophisticated teaching technologies, tremendous advances in teacher education and curriculum development, and over 1500 studies in the past decade on learning processes and applications relative to the mentally handicapped population (Robinson & Robinson, 1976; Zeaman, 1974). It is rather clear that the majority of these children perceive their educational managers as ineffectual facilitators in the acquisition of reading ability.

On the other hand, as these children perceived their parents as a primary source of instruction, their parents did not appear to possess a great deal of objective knowledge about their children's reading and writing skills. While parental data and classroom data correspond in assessing children's abilities to recognize letters, classroom-based data contrasted with parental reports relative to the children's ability to recognize words, requests for assistance in identification of unknown words, and interest in word identification and meaning. While eleven parents identified their children as recognizing less than ten words, the classroom-based data, demonstrated that most children could recognize and write at least ten words. A greater disparity between parental reports and classroom data was noted in assistance requested for identification of unknown words as well as frequency of attempts to identify unknown words. These behaviors were noted daily in the classroom while parents did not recall these behaviors occurring in the

home. This marked incongruence may be another indication that reading and writing are not salient features of the home environment.

Seven of the children felt that learning to read would be very easy. This response was offered by these children even after several unsuccessful years where reading instruction was attempted. It appears that even with a background of failure these children still feel that learning to read is a possibility. Several of the children offered reasonable reading acquisition techniques. Six children felt that they would learn to read by being exposed to books. One child mentioned memory as a reading acquisition technique. It has been suggested that early readers may employ memory reading when learning to read (Doake, 1979) or that troubled readers may benefit from this technique (Chomsky, 1976).

The three children providing oral reading miscue data indicated an overall lack of word identification strategies by their repeated omissions of unknown words. These readers appeared and depend on the grapheme/phoneme cue system to the exclusion of the other two systems as indicated below:

on little
the cat looks up.

sat & barn
he sees the bird

The readers did produce miscues involving use of the syntactic and semantics cue systems:

in this
the cat is near the tree.

Occasionally reading behavior involving dialect would produce meaningful miscues.

Billy came to play.

looking at Billy

Skip looked at Billy.

One explanation for the high graphic/sound similarity of miscues may be suggested in an examination of these children's past instructional history in which drill in sight words and sounds was a major emphases. This instruction might explain miscues in which children substituted words beginning with the same letter as unknown words as demonstrated below:

came my from
text: catch me if you can

said can
text: Skip came to play

Lack of correction strategies also affected comprehension. These readers did not attempt to correct miscues which distorted the meaning. This behavior would suggest that the children were not cognizant of the fact that reading should be meaningful.

Omission of words, high graphic/sound similarity of miscues and absence of correction strategies typified the reading behavior of the three readers. Each of these responses indicate that the reader is unable to produce oral reading which sounds like language.

The data reveals that children view parents as an influential feature in the reading acquisition process, but in fact the home appears to offer little systematic instruction or exposure to print. Concurrently, while teachers ideally offer instructional programs and systematic instruction as well as opportunities for exposure to print the data reveal that these efforts yield few qualitative differences among these twelve MMR children (i.e. actual reading behaviors, concepts of reading).

IMPLICATIONS

The data collected from the parent interviews as well as the children's reading and writing inventories strongly suggests a need to infuse a practical awareness of reading and writing into the home environment. Parents need to be informed that the home environment can be easily and inexpensively adapted to provide an enhanced atmosphere for print awareness. Writing materials such as pens, felt tip markers, crayons, and paper should be made available to the children. Books and other printed material should be readily available through library visits, cooperation with the school (e.g. lending library), and community sharing of printed material between neighbors, friends, and relatives.

Further encouragement of a child's interest in print allows development of functional uses of written communication. Letter writing, grocery lists and messages are all activities that would involve children in the functional use of print.

While opportunities in the home environment for growth in reading and writing behavior can readily be accomplished, the school environment remains a virtually untapped resource to improve children's qualitative language behavior. Previous educational goals as determined by these children's instructional histories reflect quantitative changes (e.g. write letters of the alphabet, increase sight word vocabulary). Qualitative achievements can be accomplished in the educational setting by changing educational goals and objectives as well as utilizing a language model that stresses qualitative growth (i.e. comprehension based, whole language model). Meaningful reading and writing should become an integral and systematic part of the child's daily educational experiences.

Writing needs to be presented as a natural language activity. The children's spelling should be accepted in its present stage of development. This approach focuses on the message while deemphasizing the importance of the mechanics of traditional spelling in the writing efforts of retarded individuals. Perhaps the children in the present study produced only lists of words due to their previous instructional expectations. Those goals stressed correctness over meaningful thought production. Natural interest in writing/spelling should be encouraged through functional activities (e.g. writing permission slips to go to the lavatory, producing request slips for checking out classroom materials for home use, and note taking activities). Writing opportunities can be accomplished in a non-threatening atmosphere where children are free to practice, experiment, and explore print production and manipulation. These activities would help them increase their present levels of writing and spelling behaviors.

Numerous opportunities should be provided for reading at school. Reading aloud to these children should be employed for enjoyment and concept development in various academic areas. The teacher's oral reading will acquaint children with a variety of printed material and writing styles that would normally exceed their reading ability as well as provide an approach model of reading behavior (Haskett & Lenfestey, 1974). Teacher sustained oral reading (SOR) (Feldman, 1980) can be implemented as an uninterrupted oral reading period (Feldman, 1980; Haskett & Lenfestey, 1974). At this time reading for functional purposes (i.e. recipes, television guides, menus) as well as enjoyment and learning can be accomplished.

Although Sustained Silent Reading (SSR) is not routinely utilized with the mentally retarded in instructional programming, these exceptional children should have the opportunity to spend uninterrupted time with printed material

they enjoy. This should be done in addition to regularly scheduled reading activities designed for recreation, learning and enjoyment. This activity would also allow opportunity for the teacher to model reading behavior. All children need to see adults, siblings and friends gain pleasure from reading. This procedure may be implemented with mentally retarded children scheduling only 3 to 5 minute intervals where children and adults exclude all activities but reading. This time could be increased as children learn to increase their attention to printed materials.

Meaningful reading experiences can be provided in the instructional setting by incorporating practical reality based activities into the daily reading program. Reading the cafeteria menu, directions for games and hobbies, newspaper comics, empty grocery boxes and containers, street signs and maps, and media commercials and announcements all have direct application to more normalized community living.

Teachers must be assisted in becoming more influential persons in these children's reading acquisition process. A common factor found in all the children in the present study was their dependence on significant others to gain meaning from print. This high dependency appeared to be a function of the acquisition process. While these children demonstrated high motivation, although historically failure-saturated as evidenced by their limited success in reading, all children demonstrated that they had accomplished much of the instructional content and sequence of their reading program objectives. All of the reading programs, except the one employed with Laura and Sedrick had stressed isolated reading skills (i.e. letters recognized, sight word, rote expression). This progression of letters-to-words-word combinations and then to sentences failed to produce even one child who was able to read efficiently.

A prohibitive factor limiting the implementation of a comprehension based-whole language model of reading instruction may be the administrative necessity required by federal law (i.e. PL 94-142) of utilizing instructional goals and objectives that require observable, measureable quantitative behavioral changes. Each child requires an Individualized Education Program (IEP) that stresses teacher accountability for the child's educational progress. Evaluative instruments that demonstrate instructional progress must be utilized. Few instruments which measure qualitative changes (e.g. RMI) are presently available or employed on a wide scale basis. Teachers need to be aware that qualitative growth can be adapted to IEP requirements by stressing goals that can be measured in terms of behavior (i.e. increased evidence of semantically acceptable miscues, ability to predict in reading).

Even though none of these children were efficient readers, many were able to express rather sophisticated ideas about efficient methodologies that could be utilized to gain reading proficiency. Teachers should not overlook the possibility that some efficient instruction techniques may be suggested by children (i.e. memory reading, exposure to print). These strategies may characterize their individual learning styles. All significant people involved in the reading acquisition process including the student may make important contributions towards more productive instructional techniques in this critical language area.

Research Implications

The present study gave additional support to the belief that descriptive research with mentally retarded children can yield valuable information without the necessity of including nonretarded control groups (Strieb, 1977; Raumanauskas, 1972). In fact, several researchers (Baumeister, 1967; Estes; 1970; Haywood, 1970) contend that comparison of retarded and nonretarded

children display so many inter-individual differences as to make the results of comparative studies extremely difficult to interpret. Therefore, continued descriptive research without the necessity of including chronological age or mental age matched or equivalent control groups appears to be a justifiable research paradigm. This does not exclude the possibility of utilizing non-retarded children with retarded individuals in the same study, but such costly, time consuming efforts should be well justified on the basis of strong theoretical and/or empirical rationale.

Since the classroom assignment of mentally retarded children is generally more flexible than the classroom assignment of nonretarded children, language model testing may be readily accomplished through programmatic research. The instructional approach towards reading and writing which encourages meaningful language usage (i.e. whole language approach) may be evaluated by comparing more traditional approaches such as phonics in the natural instructional setting across various levels and categories of exceptionality (i.e. language learning disabled, mildly mentally retarded).

While a plethora of research studies have focused on the quanitative aspects of reading development (i.e. sight words, letter names) of exceptional as well as non exceptional populations, minimal attention has been given to oral reading responses in relation to use of semantics, syntax, and grapho-phonemic relationships. Such research would lead to possible differences of a qualitative nature as opposed to differences of a quanitative nature. Qualitative language research is in much demand of investigatory attention (Mercer & Snell, 1977).

Research is needed to determine if qualitative differences between children lead to quantitative differences. Should qualitative aspects of reading and writing be identified and correlated with overall achievement

as measured in quanitative terms utilization of the whole language model will be given much needed empirical support (Bryan & Bryan, 1978).

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APPENDIX A

PARENT QUESTIONNAIRE

PARENT QUESTIONNAIRE

Child's Name _____ Birthday _____

Sex _____ Number of older brothers____ Sisters ____

Date _____

Directions: For each question, please circle the response that comes closest to describing your child's behavior.

Does your child point out the name letters of the alphabet when playing?

Seldom occasionally very often

How many different alphabet letters does your child try to print?

less than 5 about 10 more than 20

Does your child recite the whole alphabet without any mistakes?

seldom occasionally very often

If your child prints, what case does he use?

upper (capital letters) lower both

Did someone teach your child to read?

no one older brother or sister parent/other

If other, please explain _____

If someone is teaching your child, what is being taught? Circle any being taught.

letter names	letter sounds
printing letters	printing words
reading words	reading stories
spelling words	other

Does your child read books by him or her self?

no occasionally often

What new words have you noticed your child reading? List as many as you can think of (but no more than 15) that he identified. For example, did your child point out and read labels on foods, words in books or magazines? I am interested in which printed words your child notices recently.

PARENT QUESTIONNAIRE 2

How many printed words altogether do you think your child can read?

Less than 5 about 10 more than 20

Does your child ask for a printed word to be read to him/her?

seldom occasionally very often

Does your child try to identify a printed word by sounding out the letters?

seldom occasionally very often

Does your child spell out the letters in printed words?

seldom occasionally very often

How many alphabet letters do you think your child can recognize?

less than 5 about 10 over 20

How often is your child read to at home per week?

less than 1/2 hour about 1 hour more than 2 hours

How often does your child visit the public library?

irregularly monthly once or twice a month weekly

Does your child have a subscription to a children's magazine?

no yes please identify the magazine _____

Does your child ask to have favorite books reread?

very often occasionally seldom

What is the average time your child watches T.V. per day?

Less than 1/2 hour about 1 hour more than 2 hours

Does your child hear story records at home?

very often occasionally seldom

Does your child watch Sesame Street on T.V.?

seldom occasionally very often

PARENT QUESTIONNAIRE 3

Does your child watch Electric Company on T.V.?

seldom occasionally very often

Does your child watch Saturday A.M. cartoons on T.V.?

seldom occasionally very often

Does your child talk to you about Sesame Street or Electric Company material?

seldom occasionally very often

How often does your child go on outings with you (trips to special places, shopping, visits to friends, etc.)

Less than twice a week about four times a week more than six times a week

Does your child own any alphabet books?

no one several

INDIVIDUAL QUESTIONNAIRE

If possible, both parents should fill out this page.

Please identify parent completing this page as Mother or Father _____

How did you learn to read?

School home self-taught other_____

Do you think you are a good reader?

yes sometimes no

What makes a good reader?

What would you like to do better as a reader?

When you come to a word you don't know, what do you do?

What do you read routinely? How often?

What do you like to read?

Is there anything you don't like to read?

Do you recall a special book or the most memorable thing you have read?

Does your child see you read? yes no

What is your occupation? _____

How far did you go in school ?

Did not complete High School High School College Graduate School

How many parents are at home with this child?

APPENDIX B

BOOK HANDLING KNOWLEDGE INVENTORY

BOOK HANDLING KNOWLEDGE INVENTORY

ITEM	ADMINISTRATION	INSTRUCTIONS	RESPONSE	CHILD'S RESPONSE
1	Show book; title covered by hand. Flip over pages.	"What's this called?" "What's this thing?" If child answers with the name of the book, record and ask "What's (say name of book given by child?	"Book" "Story Book" "Story" Name of Book	
2	Displaying book.	"What do you do with it?"	"Read it" "Look at it" "Tell it" "Open it"	
3	Displaying book.	"What's inside it?"	"Story" "Picture" "words" "pages" "letters" "things."	
4	Present wrong way up and back towards S.	"Show me the front of this book" "Take the book and open it so that we can read it together.	Any indication of front or first page.	
5.	Turn to page 3	Hold on to a page and say "Show me a page in this book." "Is this a page?"	Point to page "Yes"	
6	Give the book to child.	Read this to me.	Record all responses	

7	If child doesn't read the back or does inappropriate book reading continue: give the book to the child. Read the first page.	I'm going to read you this story. You show me where to start reading." "Where do I begin?"	Indicates print on first page
8	Turn to the next page.	"Show me the top of this page." "Show me the bottom this page.	Indicates top edge or toward top. Indicates bottom of page or towards bottom.
9	Show the page to the child.	"Show me with your finger exactly where I have to begin reading."	Points to the first word on the page.
10	Show the page to the child.	"Show me with your finger which way I go, as I read this page.	Left to right, on the page.
11	Continue to show the page	"Where then?" (This may already have been done or stated in #9, if so credit but do not repeat.)	Top line to bottom line.
12	Read the page.	"You point to the story while I read it." (Read slowly)	Exact matching of spoken word with written word. Close matching.
13	If there is print on both pages display the pages.	"Where do I go now?"	Points to the first lint of print on the next page.

14	Read the next two pages. If possible turn to a page with print and a picture on it. Turn the book upside down without the child seeing you.	Can you or I read this now? Why or why not?	
15	Show how to use masking card to close the "curtains" over the "window." (Use two pieces of black cardboard.)	"Let's put some of the story in this window. I want you to close the curtains like this until I can see just one letter." "Now just two letters."	One letter correct Two letters correct
16	Open "curtains"	"Now close it until we can see just one word." "Now just two words."	1 word correct 2 words correct
17	Open "curtains"	"Show me the first letter in a word- any word."	First correct Last correct
18	Remove card	"Show me a capital letter - any capital letter."	Points clearly to a capital letter. Points to any capital letter.
19	Read to end of story. Close book and pass it to the child.	"Show me the name of the book" or "Name of story?"	Cover, fly-leaf or title page.
20	Get at comprehension	"Tell me something about the story."	
21	Leave the book with the child.	"Show me the beginning of the story." "Show me the end of the story."	Opens book to first page and points to the first line. Turns to last page line.
22	Title page pointing	"It says here (Read title of the book" by ...(Read the author's name). What does by...(say author's name) mean?"	"He wrote it." "He made up the story." "He made the book."

APPENDIX C

CONCEPTS OF READING AND CONCEPTS OF WRITING INVENTORIES

PRE-SCHOOL CONCEPTS OF READING

Name of child:_____ Date:_____

Age of child (years & months):_____ Sex:_____

Name of interviewer:_____

(Please use a cassette tape recorder for the interview if possible)

---

1. Do you know how to read?
2. How did you learn how to read?
   a. Did somebody help you learn to read? If yes, who?
3. Do you like to read?
4. What do you like to read?
5. Do you want to be able to read?
6. How will you learn to read?
7. Does someone have to help you learn how to read?
8. Who do you think will help you learn how to read?
9. Do you think that you could learn to read by yourself?
10. Do you think learning to read will be easy/hard?
11. Why do you think learning to read will be easy/hard?
12. Do the people you live with know how to read?
13. Do they ever read to you? Who?
14. What do they read to you?
15. Do you like it? Why?
16. What do you look at while you are being read to? (Probe with "Anything else?")
17. If I said I'm going to read you a story what would I do?
18. If I said I'm going to tell you a story, what would I do?
19. Is it possible to read with your eyes closed?

    "Yes/No", ask "Why"?

20. Do you have a T.V.?

21. Does anyone in your house ever read in the kitchen?

    a. What?

    b. Living room: Bedroom

    (Try to get at books, magazines and newspapers and labels without using those words. If not ask directly about them.)

22. Do you ever go to the store with your parents?

23. Why do people read?

25. Do you speak a language?

26. What do you speak?

PRE-SCHOOL CONCEPTS OF WRITING

Name of child:_____ Date:_____

Age of child (years & months):_____ Sex:_____

Name of interviewer:_____

(Please use a cassette tape recorder for the interview if possible)

---

1. Write for me (Have available lined paper, unlined paper, pencil, pen, magic marker and crayon in front of child). If child says no, say write your name for me.
2. Read me what you wrote.
3. Tell me about what you wrote? What's this and this? (Get at terms word, letter, etc.)
4. Write me a letter?
5. Do you write at home or school?
6. What do you write?
7. Why do people write?
8. Draw me a picture.
9. Is drawing like writing? How? Or why not?
10. If the child can't write his/her own name then write three different looking names including the child's and ask him to read his name..

APPENDIX D

READING INTERVIEW

READING INTERVIEW

Name_____ Age_____ Date_____

Occupation_____ Education Level_____

Sex_____ Interview Setting_____

1. When you are reading and you come to something you don't know, what do you do?
2. Who is a good reader that you know? (Ask about teacher)
3. What makes her/him a good reader?
4. Do you think that s/he ever comes to something s/he doesn't know when s/he's reading?
5. Yes When s/he does come to something s/he doesn't know, what do you thing s/he does about it?

   No Suppose that s/he does come to something that s/he doesn/t pretend to know. What do you think s/he does about it?
6. If you know that someone was having difficulty reading how would you help that person?
7. What would $\frac{\text{a}}{\text{your}}$ teacher do to help that person?
8. How did you lean to read?

   What did (then/you) do to help you learn?
9. What would you like to do better as a reader?
10. Do you think that you are a good reader? Yes____ No_____

Additional Questions:

11. What do you read routinely? Like everday or everyweek?
12. What do you like most of all to read?
13. Can you remember any special book or the most memorable thing you have ever read?

APPENDIX E

MISCUE ANALYSIS

1. Evaluation
2. Reading Miscue Inventory

READING MISCUE INVENTORY: EVALUATION

by Yetta Goodman and Carolyn Burke and Margaret Lindberg

WORD LEVEL SUBSTITUTION IN CONTEXT: EVALUATION

Evaluation of the following questions indicates whether the student is making appropriate use of grammatical function and of the graphophonic cueing system. Questions 1,2, and 3 are answered for only word level substitution miscues. Under column headed Text list the word that is involved in a substitution miscue. Next to it, under the column headed Reader list the word which the reader substituted. Answer the following questions for each of these pairs of words. If dialect is involved place a d next to the reader's substitution.

01. Graphic Similarity:		How much do the two words look alike?
	high	TWO of their three parts are similar. Beginning and middle Beginning and end. Middle and end.
	some	ONE of their three parts is similar. Beginning or general configuaration. Middle End
	none	NONE of their three parts are similar.
02. Sound Similarity:		How much do the two words sound alike?
	high	TWO of their three parts are similar. Beginning and middle. Beginning and end. Middle and end.
	some	ONE of their three parts is similar. Beginning or general configuaration. Middle. End.
03 Gramatical Function:		Is the grammatical function of the reader's word the same as the grammatical function of the text word? (To help answer this question read the text sentence with the reader's miscue in it.)
	same	The reader's miscue is the same grammatical function as the text word.
	questionable	It is impossible to tell whether the grammatical function of the reader's miscue of the same or different from the grammatical function of the text.
	different	The reader's miscue is a different grammatical function than the text word.

LANGUAGE SENSE: EVALUATION

Evaluation of the following two questions indicates the degree to which the reader is concerned with producing acceptable language as he reads. Questions 4 and 5 are answered for every sentence which contain one or more miscues. If the micsues exceed sentence boundaries include as many sentences as necessary to maintain the relationship of all the miscues caused by other miscues. To read for acceptability consider each sentence as the reader finally produced it. All corrected miscues or attempts at correction should be read as finally resolved by the reader. When there are no attempts at correction, the miscues should be read as produced. Miscues which are acceptable within the reader's dialect should be considered acceptable.

Number each sentence in the text and place the numbers for sentences containing miscues under the column headed Sentence Number. Next to this, in the column headed Number of Miscues, indicate the number of miscues contained in each of the sentences.

Q4.	Syntactic Acceptability:	Is the sentence involving the miscues syntactically (grammatically) acceptable in the story?
	yes	When the sentence is read as finally produced by the reader it is syntactically acceptable in the story.
	no	When the sentence is read as finally produced by the reader it is not syntactically acceptable in the story.
Q5.	Semantic Acceptability:	Is the sentence involving the miscues semantically (meaning) acceptable in the story?
	yes	When the sentence is read as finally produced by the reader it is semantically acceptable in the story.
	no	When the sentence is read as finally produced by the reader it is not semantically acceptable in the story.

COMPREHENDING: EVALUATION

Evaluation of this question indicates the degree to which the reader changes the intended meaning of the author as he reads. Question 6 is answered for every sentence which contains one or more miscues. To determine the degree of change the sentence is read as the reader finally produced it. All corrected miscues or attempts at correction should be read as finally resolved by the reader. When there are no attempts at correction the miscue should be read as produced.

06. Meaning Change:	Is there a change in meaning involved in the sentence?
no	When the sentence is read as finally produced by the reader there is NO change in the intended meaning of the story.
minimal	When the sentence is read as finally produced by the reader there is a change, inconsistency or loss to minor incidents, characters or sequences in the story.

SUMMARY AND PROFILE SHEET OF READER'S STRENGTHS

Reader's Name _____

1. The percentage of substitution miscues which indicate high Graphic and high Sound similarities.

   enter % Q1 high _____
   enter % Q2 high _____

   The percentage of substitution miscues which indicate Graphic and Sound similarities.

   enter % Q1 some _____
   enter % Q2 some _____
   combine Q1 high plus some _____
   combine Q2 high plus some _____

2. The percentage of substitution miscues which indicate similar Grammatical Function.

   enter % Q3 high _____

3. The percentage of instances that the reader produced syntactically acceptable sentences and/or corrected syntactically unacceptable sentences.

   enter % Q4 yes _____

4. The percentage of instances the reader produced semantically acceptable sentences and/or corrected semantically unacceptable sentences.

   enter % Q5 yes _____

5. The percentage of instances that the reader retained the author's meaning.

   enter % Q6 no change _____
   enter % Q6 minimal change _____
   combine Q6 no change plus Q6 minimal change _____

In order to obtain data about the following two areas of strength, it is necessary to return to the work sheet for the information. Read the sentence in which the miscue asked about occurs as if it were the only miscue in the sentence.

6. Relationship between graphic dissimilarity and meaning change substitution miscures with Graphic similarity marked "none" but where the miscues are either high quality miscues (indicate minimal or no change of meaning) or are corrected.

7. Relationship between grammatical function dissimilarity and syntactically acceptable substitution miscues with no Grammatical Function similarity but where the miscues are in structures which are syntactically acceptable or are corrected.

READING MISCUE INVENTORY

Word Level Substitution in Context

NUMBER	READER	TEXT	Q1 Graphic			Q2 Sound			Q3 Gram. Func.			Language Sense				Comprehending	
			High	Some	None	High	Some	None	Same	?	Different	Sent. or Line Number	Number of Miscues	Q4 Syntactic Acceptability	Q5 Semantic Acceptability	Q6 Meaning Change: No	Minimal
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
	Number of words in portion coded:	Column Total										Total Sents.	Total Miscue	Total Yes	Total Yes		
	M.P.W.U.:	Percentages															

BIOGRAPHY

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